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ROD
                                                               11-APR-1996
                          984 bp
                                    mRNA
LOCUS
            MMIL12P40
            M.monax mRNA for Il-12 p40 subunit.
DEFINITION
            X97019
ACCESSION
                                                   Birgit OPPMANN, et al.
            X97019.1 GI:1262373
VERSION
                                                   USSN: 09/658.699
            interleukin 12; p40 subunit.
KEYWORDS
                                                   Atty. Docket No.: DX01042X
            woodchuck.
SOURCE
  ORGANISM
            Marmota monax
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Sciuridae; Sciurinae;
            Marmota.
               (bases 1 to 984)
REFERENCE
            Ackrill, A.M.
  AUTHORS
            Direct Submission
  TITLE
            Submitted (21-MAR-1996) A.M. Ackrill, Roche Research Centre, PO Box
  JOURNAL
            8, Broadwater Road, Welwyn Garden City, Herts AL7 3AY, UK
               (bases 1 to 984)
REFERENCE
            Laxton, C.D., Foster, G.R., Shanmuganathan, S., Mills, J.S. and
  AUTHORS
            Molecular cloning of interleukin-12 from the woodchuck Marmota
  TITLE
            monax
            Unpublished
  JOURNAL
                     Location/Qualifiers
FEATURES
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                     /db_xref="SWISS-PROT:Q61729"
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                     LLHKNEDGIWSTDILKKKEPENKNLVTCEAKNYSGRFTCWWLTAISTDVNFSVKSHRG
                     SSDPQGVTCGEATLSAERVKIEQREYKKYSVQCQEDNACPTAEETLPITVVVDAVHKL
                     KYENYISSFFIRDIIKPDPPKNLKMKPSKTPQQVEVTWEYPDSWSTPHSYFSLTFSVQ
                     VQGKKKKRSNTLHVDKTSVTVTCQKGAKVSVQARDRYYNSSWSEWATMSCP"
                                   259 g
                                            198 t
                271 a
                          256 c
BASE COUNT
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      121 acacctggag aaaaggtggt cctcacctgt gacactcctg aagaagacgg catcacctgg
      181 acctcagage agageagtga ggtettagge teeggeaaaa eeetgaeeat tetagteaaa
      241 gagtttgaag acgctggcca ctacacctgc cgcagaggag gtgaagttct gagccagatg
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      481 tectetgace etcaaggggt gaegtgtgga gaageaacte tetetgeaga gagggteaaa
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      661 gaaaactaca tcagcagctt cttcatcaga gacatcatca aacctgaccc acccaagaac
      721 ctaaagatga agccatccaa gactcctcay caggtggagg tcacctggga gtacccggac
      781 agctggagca ccccgcactc ctacttctcc ctgacattct ctgtgcaggt ccagggcaaa
      841 aagaagaaaa ggagcaatac tetecaegtg gataagaeet eagteaeagt gaeetgeeag
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LOCUS
            CFU49100
                         1015 bp
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                                                               13-MAR-1996
            Canis familiaris interleukin-12 p40 subunit mRNA, complete cds.
DEFINITION
ACCESSION
            U49100
            U49100.1 GI:1223907
VERSION
                                              Birgit OPPMANN, et al.
KEYWORDS
                                              USSN: 09/658,699
            dog.
SOURCE
                                              Atty. Docket No.: DX01042X
            Canis familiaris
  ORGANISM
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
REFERENCE
               (bases 1 to 1015)
  AUTHORS
            Belke-Louis, G.F. and Buettner, M.
  TITLE
            Cloning and sequence analysis of the p35 and p40 subunits of canine
            interleukin-12
  JOURNAL
            Unpublished
REFERENCE
            2
               (bases 1 to 1015)
  AUTHORS
            Belke-Louis, G.F.
  TITLE
            Direct Submission
            Submitted (13-FEB-1996) Georg F. Belke-Louis, Institute of Med.
  JOURNAL
            Microbiology, Veterináerstr. 13, Muenchen, D-80539, Germany
FEATURES
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                     /db xref="GI:1223908"
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                     LIHKKEDGIWSTDILKEQKESKNKIFLKCEAKNYSGRFTCWWLTAISTDLKFSVKSSR
                     GFSDPQGVTCGAVTLSAERVRVDNRDYKKYTVECQEGSACPSAEESLPIEVVVDAIHK
                     LKYENYTSSFFIRDIIKPDPPTNLQLKPLKNSRHVEVSWEYPDTWSTPHSYFSLTFCV
                     QAQGKNNREKKDRLCVDKTSAKVVCHKDAKIRVQARDRYYSSSWSDWASVSCS"
BASE COUNT
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                                  254 g
                                           225 t
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      121 gcccccggag aaatggtggt cctcacctgc catacccctg aagaagatga catcacttgg
      181 acctcagcgc agagcagtga agtcctaggt tctggtaaaa ctctgaccat ccaagtcaaa
      241 gaatttggag atgctggcca gtatacctgc cataaaggag gcaaggttct gagccgctca
      301 ctcctgttga ttcacaaaaa agaagatgga atttggtcca ctgatatctt aaaggaacag
      361 aaaqaatcca aaaataagat ctttctgaaa tgtgaggcaa agaattattc tggacgtttc
      421 acatgctggt ggctgacggc aatcagtact gatttgaaat tcagtgtcaa aagtagcaga
      481 ggcttctctg acccccaagg ggtgacatgt ggagcagtga cactttcagc agagagggtc
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      601 ccctctqccq aqqaqaqcct acccatcgag gtcgtggtgg atgctattca caagctcaag
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      721 aacctgcage tgaagecatt gaaaaattet eggeacgtgg aggteagetg ggaataceee
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      841 aagaacaata gagaaaagaa agatagactc tgcgtggaca agacctcagc caaqqtcqtq
      901 tgccacaagg atgccaagat ccgcgtgcaa gcccgagacc gctactatag ttcatcctgg
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11
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```
1012 bp
LOCUS
            AF007576
                                    mRNA
                                                     MAM
                                                               14-JUL-1997
DEFINITION Capra hircus interleukin 12 p40 subunit (IL-12) mRNA, complete cds.
ACCESSION
            AF007576
            AF007576.1 GI:2253433
VERSION
KEYWORDS
SOURCE
            goat.
  ORGANISM
            Capra hircus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
            Bovidae; Caprinae; Capra.
REFERENCE
            1 (bases 1 to 1012)
            Beyer, J.C., Cheevers, W.P. and Kumpula-McWhirter, N.M.
  AUTHORS
            CLoning of caprine IL-12 40 kDa subunit
  TITLE
  JOURNAL
            Unpublished
               (bases 1 to 1012)
REFERENCE
            2
            Beyer, J.C., Cheevers, W.P. and Kumpula-McWhirter, N.M.
  AUTHORS
  TITLE
            Direct Submission
            Submitted (09-JUN-1997) Veterinary Microbiology and Pathology,
  JOURNAL
            Washington State University, P.O. Box 647040, Pullman, WA
            99164-7040, USA
FEATURES
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                     /db xref="taxon:9925"
                     /cell type="LPS-stimulated microglial cell"
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                     /gene="IL-12"
                                                 Birgit OPPMANN, et al.
     CDS
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                                                 USSN: 09/658,699
                     /gene="IL-12"
                                                 Atty. Docket No.: DX01042X
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                     LLHKKEDGIWSTDILKDQKEPKAKSFLKCEAKDYSGHFTCSWLTAISTNLKFSVKSSR
                     GSSDPRGVTCGAASLSAEKVSMDHREYNKYTVECQEGSACPAAEESLPIEVVMEAVHK
                     LKYENYTSSFFIRDIIKPDPPKNLQLRPLKNSRQVEVSWEYPDTWSTPHSYFSLTFCV
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BASE COUNT
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      541 agcatggacc acagggagta taacaagtac acagtggagt gtcaggaggg cagtgcctgc
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      661 tatgaaaact acaccagcag cttcttcatc agggacatca tcaaaccaga cccacccaag
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LOCUS
            FCU83184
                          990 bp
                                    mRNA
                                                     MAM
                                                               16-JUL-1999
DEFINITION Felis catus interleukin-12 p40 subunit (IL-12) mRNA, complete cds.
            U83184
ACCESSION
            U83184.1 GI:2735050
VERSION
KEYWORDS
SOURCE
            cat.
  ORGANISM
            Felis catus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Carnivora; Fissipedia; Felidae; Felis.
REFERENCE
               (bases 1 to 990)
            Fehr, D., Dean, G.A., Huder, J., Fan, Z., Huettner, S., Higgins, J.W.,
 AUTHORS
            Pedersen, N.C. and Lutz, H.
  TITLE
            Nucleotide and predicted peptide sequence of feline interleukin-12
            DNA Seq. 8 (1-2), 77-82 (1997)
  JOURNAL
                                                  Birgit OPPMANN, et al.
 MEDLINE
            98182592
                                                  USSN: 09/658.699
   PUBMED
            9522125
                                                  Atty. Docket No.: DX01042X
               (bases 1 to 990)
REFERENCE
            2
            Fehr, D., Dean, G.A., Hüder, J., Fan, Z., Huettner, S., Higgins, J.W.,
 AUTHORS
            Pedersen, N.C. and Lutz, H.
  TITLE
            Direct Submission
            Submitted (24-DEC-1996) Clinical Laboratory, Department of Internal
  JOURNAL
            Veterinary Medicine, University of Zurich, Winterthurerstrasse 260,
            Zurich, ZH 8057, Switzerland
FEATURES
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BASE COUNT
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      121 gcccccggag aaatggtggt cctcacctgt gacacgcctg aagaagatga catcacctgg
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11
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LOCUS
            RNU16674
                          821 bp
                                    mRNA
                                                    ROD
                                                              07-NOV-1994
DEFINITION Rattus norvegicus interleukin-12p40 mRNA, partial cds.
ACCESSION
            U16674.1 GI:565093
VERSION
KEYWORDS
SOURCE
            Norway rat.
  ORGANISM
            Rattus norvegicus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
            Rattus.
            1 (bases 1 to 821)
REFERENCE
            Goodman, R.E. and Toews, G.B.
  AUTHORS
            A partial cDNA of the coding region of rat IL-12p40, cloned by
  TITLE
            RT/PCR from Staphlococcal endotoxin stimulated splenocytes
  JOURNAL
            Unpublished
            2 (bases 1 to 821)
REFERENCE
            Goodman, R.E.
  AUTHORS
            Direct Submission
  TITLE
            Submitted (27-OCT-1994) Richard E. Goodman, Internal
  JOURNAL
            Medicine/Pulmonary, University of Michigan, 1150 W. Medical Center
            Dr., 3311 Med. Sci. I, Ann Arbor, MI 48109-0652, USA
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                     /tissue type="cultured splenocytes (SEA plus SEB
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                     /protein id="AAA52229.1"
                     /db xref="GI:565094"
                     /translation="MCHQKLTFSWFAMVLLVSPLMAMWELEKDVYVVEVDWRPDAPGE
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                     ESRAVTCGAASLSAEKVTLNQRDYEKYSVACQEDVTCPTAEETLPIELVVEAQQQNKY
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      661 gaataaatat gagaactaca gcaccagctt cttcatcagg gacatcatca aaccggaccc
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      781 ccctgactcc tggagcactc cccattccta cttctccctc a
11
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Birgit OPPMANN, et al. USSN: 09/658,699 Atty. Docket No.: DX01042X

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LOCUS
                        1399 bp
                                  mRNA
                                                   PRI
            HUMCLMF40
                                                             27-APR-1993
DEFINITION
           Human cytotoxic lymphocyte maturation factor 40 kDa subunit mRNA,
           complete cds.
           M65272 M38443 M38444
ACCESSION
VERSION
           M65272.1 GI:180625
           cytotoxic lymphocyte maturation factor 40 kDa subunit; interleukin.
KEYWORDS
SOURCE
           Human, cDNA to mRNA.
  ORGANISM Homo sapiens
           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
           Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE
           1 (bases 1 to 1399)
           Gubler, U., Chua, A.O., Schoenhaut, D.S., Dwyer, C.M., McComas, W.,
 AUTHORS
           Motyka, R., Nabavi, N., Wolitzky, A.G., Quinn, P.M., Familletti, P.C.
            and Gately, M.K.
  TITLE
           Coexpression of two distinct genes is required to generate secreted
           bioactive cytotoxic lymphocyte maturation factor
  JOURNAL
           Proc. Natl. Acad. Sci. U.S.A. 88, 4143-4147 (1991)
 MEDLINE
           91239523
                    Location/Qualifiers
FEATURES
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                    MVVLTCDTPEEDGITWTLDQSSEVLGSGKTLTIQVKEFGDAGQYTCHKGGEVLSHSLL
                    LLHKKEDGIWSTDILKDQKEPKNKTFLRCEAKNYSGRFTCWWLTTISTDLTFSVKSSR
                    GSSDPQGVTCGAATLSAERVRGDNKEYEYSVECQEDSACPAAEESLPIEVMVDAVHKL
                    KYENYTSSFFIRDIIKPDPPKNLQLKPLKNSRQVEVSWEYPDTWSTPHSYFSLTFCVQ
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BASE COUNT
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     1261 ttcatgctat ttaaatattt aagtaattta tgtatttatt agtatattac tgttatttaa
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Birgit OPPMANN, et al. USSN: 09/658,699

Atty. Docket No.: DX01042X

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LOCUS
            AF133197
                         1008 bp
                                    mRNA
                                                     ROD
                                                                08-APR-1999
            Rattus norvegicus interleukin-12 p40 precursor, mRNA, complete cds.
DEFINITION
ACCESSION
            AF133197
VERSION
            AF133197.1 GI:4574731
                                            Birgit OPPMANN, et al.
KEYWORDS
                                            USSN: 09/658,699
SOURCE
            Norway rat.
                                            Atty. Docket No.: DX01042X
            Rattus norvegicus
  ORGANISM
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
            Rattus.
REFERENCE
            1 (bases 1 to 1008)
            Khalife, J., Pierrot, C., Cocude, C., Cetre, C., Godin, C. and Capron, A.
  AUTHORS
  TITLE
            Molecular cloning and sequencing of the rat interleukin-12 p40 gene
  JOURNAL
            Eur. Cytokine Netw. 9 (1), 69-73 (1998)
            98273736
  MEDLINE
REFERENCE
               (bases 1 to 1008)
  AUTHORS
            Khalife, J., Pierrot, C., Cocude, C., Cetre, C., Godin, C. and Capron, A.
            Direct Submission
  TITLE
  JOURNAL
            Submitted (05-MAR-1999) InSERM U167, 1, rue du professeur Calmette,
            Lille 59019, France
FEATURES
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BASE COUNT
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                                  263 g
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      241 gagtttctag atgctggcca atacacctgc cacagaggag gcgagactct gagccactca
      301 catctgctgc tccacaagaa ggaaaatgga atttggtcca ccgagatttt aaaaaatttc
      361 aaaaataaga ctttcctgaa gtgtgaagca ccaaactact ccggacggtt cacctgctca
      421 tggctggtgc acagaaacac ggacttgaag tttaacatca agagcagcag cagttcccct
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      901 gccqaagtcc aatqcaaagg ggcgaatatc tgcgtgcaag cgcaggaccg ctactacaat
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LOCUS
            CEU57752
                        993 bp
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                                                    MAM
                                                               28-OCT-1999
DEFINITION Cervus elaphus interleukin-12 p40 subunit mRNA, complete cds.
ACCESSION
            U57752
            U57752.1 GI:1373387
VERSION
KEYWORDS
            red deer.
SOURCE
  ORGANISM Cervus elaphus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervoidea;
            Cervidae; Cervinae; Cervus.
REFERENCE
            1 (bases 1 to 993)
            Lockhart, E., Slobbe, L. and Buchan, G.
  AUTHORS
  TITLE
            The characterisation of a cervine immunoregulatory cytokine,
            interleukin 12
  JOURNAL
            DNA Seq. 10 (2), 139-148 (1999)
  MEDLINE
            99304506
                                                     Birgit OPPMANN, et al.
            10376218
   PUBMED
                                                     USSN: 09/658,699
           2 (bases 1 to 993) 🛫
REFERENCE
                                                     Atty. Docket No.: DX01042X
 AUTHORS
           Lockhart, E.A. and Buchan, G.S.
            Direct Submission
  TITLE
            Submitted (08-MAY-1996) Euan A. Lockhart, Microbiology, University
  JOURNAL
            of Otago, Cumberland St, Dunedin, New Zealand
FEATURES
                     Location/Qualifiers
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BASE COUNT
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11
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LOCUS
                         1058 bp
                                     mRNA
            ECIL12P40
                                                     MAM
                                                                17-NOV-1999
DEFINITION Equus caballus mRNA for interleukin 12 p40 subunit.
ACCESSION
            Y11129
VERSION
            Y11129.1 GI:5441622
                                             Birgit OPPMANN, et al.
KEYWORDS
            interleukin-12 p40.
                                             USSN: 09/658,699
SOURCE
            horse.
                                            Atty. Docket No.: DX01042X
  ORGANISM Equus caballus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
REFERENCE
               (bases 1 to 1058)
  AUTHORS
            Nicolson, L., Penha-Goncalves, M.N., Keanie, J.L., Logan, N.A.,
            Argyle, D.J. and Onions, D.E.
            Cloning and sequencing of horse interleukin-12 and interleukin-18
  TITLE
            Immunogenetics 50 (1-2), 94-97 (1999)
  JOURNAL
  MEDLINE
            20009534
REFERENCE
               (bases 1 to 1058)
  AUTHORS
            Nicolson, L.
            Direct Submission
  TITLE
            Submitted (04-FEB-1997) L. Nicolson, Dept. of Vet. Pathology,
  JOURNAL
            University of Glasgow Vet. School, Bearsden Rd., Glasgow G61 1QH,
FEATURES
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                     1..990
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     misc feature
                     1..12
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                     /note="primer-derived sequence"
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LOCUS
            FCIL12P40
                         1006 bp
                                    mRNA
                                                     MAM
                                                               13-MAY-1997
DEFINITION F. catus mRNA for interleukin-12 p40 chain.
ACCESSION
            Y07762
            Y07762.1 GI:2102664
VERSION
                                         Birgit OPPMANN, et al.
            interleukin-12 p40.
KEYWORDS
                                         USSN: 09/658,699
SOURCE
            cat.
                                         Atty. Docket No.: DX01042X
  ORGANISM Felis catus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Carnivora; Fissipedia; Felidae; Felis.
REFERENCE
               (bases 1 to 1006)
            Schijns, V.E., Wierda, C.M., Vahlenkamp, T.W. and Horzinek, M.C.
  AUTHORS
            Molecular cloning of cat interleukin-12
  TITLE
  JOURNAL
            Immunogenetics 45 (6), 462-463 (1997)
            97246745
  MEDLINE
            2 (bases 1 to 1006)
REFERENCE
  AUTHORS
            Schijns, V.E.C.J.
            Direct Submission
  TITLE
            Submitted (03-SEP-1996) V.E.C.J. Schijns, Virology Division,
  JOURNAL
            Veterinary Faculty Utrecht University, Yalelaan 1, NL-3584 CL
            Utrecht, NETHERLANDS
FEATURES
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LOCUS
            MUSIL40A
                         1840 bp
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                                                    ROD
                                                              08-MAY-1993
DEFINITION Mus musculus interleukin 12 p40 subunit, complete cds.
ACCESSION
           M86671
VERSION
            M86671.1 GI:293663
KEYWORDS
            cytotoxin lymphocyte maturation factor; interleukin 12 p40 subunit;
            natural killer cell stimulatory factor.
SOURCE
            Mus musculus (strain C57BL/6) spleen cDNA to mRNA.
  ORGANISM Mus musculus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
REFERENCE
            1 (bases 1 to 1840)
  AUTHORS
            Schoenhaut, D.S., Chua, A.O., Wolitzky, A.G., Quinn, P.M., Dwyer, C.M.,
            Gately, M.K. and Gubler, U.
  TITLE
            Cloning and Expression of Murine IL-12
            J. Immunol. 148, 3433-3440 (1992)
  JOURNAL
  MEDLINE
            92268481
COMMENT
            On Jun 12, 1993 this sequence version replaced gi:198344.
            Reference [1] reports bases 1 through 1055.
FEATURES
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                     /strain="C57BL/6"
                                                   USSN: 09/658,699
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                                                   Atty. Docket No.: DX01042X
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                     /protein id="AAA39296.1"
                     /db xref="GI:293664"
                     /translation="MCPQKLTISWFAIVLLVSPLMAMWELEKDVYVVEVDWTPDAPGE
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                     DSRAVTCGMASLSAEKVTLDQRDYEKYSVSCQEDVTCPTAEETLPIELALEARQQNKY
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     1561 aagttgactc tgaagagttt agcactagtt tcaacaccaa gaaagacttt ttagaagtga
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LOCUS
            AF004024
                          984 bp
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                                                    MAM
                                                               14-NOV-2000
DEFINITION Ovis aries interleukin-12 p40 subunit precursor, mRNA, complete
            cds.
ACCESSION
            AF004024
            AF004024.2 GI:5870870
VERSION
                                             Birgit OPPMANN, et al.
KEYWORDS
                                             USSN: 09/658,699
SOURCE
            sheep.
                                             Atty. Docket No.: DX01042X
  ORGANISM Ovis aries
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
            Bovidae; Caprinae; Ovis.
REFERENCE
               (bases 1 to 984)
  AUTHORS
            Swinburne, S.J., Russ, G.R. and Krishnan, R.
  TITLE
            Ovine interleukin 12 has biological activity on ovine and human
            activated peripheral blood mononuclear cells
  JOURNAL
            Cytokine 12 (10), 1546-1552 (2000)
  MEDLINE
            20480126
           11023671
   PUBMED
            2 (bases 1 to 984)
REFERENCE
 AUTHORS
            Swinburne, S.J., Russ, G.R. and Krishnan, R.
            Direct Submission
  TITLE
            Submitted (13-MAY-1997) Transplantation Immunology Laboratory,
  JOURNAL
            Queen Elizabeth Hospital, 28 Woodville Road, Adelaide, South
            Australia 5011, Australia
REFERENCE
               (bases 1 to 984)
            Swinburne, S.J., Russ, G.R. and Krishnan, R.
  AUTHORS
  TITLE
            Direct Submission
  JOURNAL
            Submitted (13-SEP-1999) Transplantation Immunology Laboratory, The
            Queen Elizabeth Hospital, 28 Woodville Rd., Adelaide, South
            Australia, Australia
            Sequence update by submitter
  REMARK
            On Sep 13, 1999 this sequence version replaced gi:2199555.
COMMENT
FEATURES
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                     /db xref="GI:5870871"
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                     GSSDPRGVTCGAASLSAEKVSMDHREYNKYTVECQEGSACPAAEESLPIEVVMEAVHK
                     LKYENYTSSFFIRDIIKPDPPKNLQLRPLKNSRQVEVSWEYPDTWSTPHSYFSLTFCV
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BASE COUNT
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       61 gtggccatat gggaactgga gaaaaatgtt tatgttgtag aattggattg gtatcctaat
      121 gctcctggag aaacagtggt cctcacgtgt gacactcctg aagaagacgg catcacctgg
      181 acctcagacc agagcagtga ggtcctgggc tctggcaaaa ccttgaccat ccaagtcaaa
      241 gagtttggag atgctgggca gtacacctgt cacaaaggag gcgaggttct gagtcgttca
      301 ctcctcctqc tqcacaaaaa ggaagatgga atttggtcca ctgatatttt aaaggatcag
      361 aaaqaaccca aaqctaaqaq ttttttaaaa tgtgaggcaa aggattattc tggacacttc
      421 acctqctcqt qqctqacagc aatcagtact aatctgaaat tcagtqtcaa aagcagcaga
      481 ggctcctctg acccccgagg ggtgacgtgc ggagcagcgt ccctctcagc agagaaggtc
      541 agcatggacc acagggagta taacaagtac acagtggagt gtcaggaggg cagtgcctgc
      601 ccggccgccg aggagagcct gcccattgag gtcgtgatgg aagctgtgca caagctcaag
      661 tatgaaaact acaccagcag cttcttcatc agggacatca tcaaaccaga cccacccaag
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LOCUS
             CTU19834
                          1005 bp
                                     mRNA
                                                      PRI
                                                                03-FEB-1996
 DEFINITION
             Cercocebus torquatus interleukin-12 alpha p40 subunit (IL-12a)
             mRNA, complete cds.
ACCESSION
             U19834
                                                Birgit OPPMANN, et al.
 VERSION
             U19834.1 GI:644785
                                                USSN: 09/658,699
KEYWORDS
                                                Atty. Docket No.: DX01042X
SOURCE
             red-crowned mangabey.
  ORGANISM
             Cercocebus torquatus
             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
             Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
             Cercopithecinae; Cercocebus.
REFERENCE
                (bases 1 to 1005)
             Villinger, F., Brar, S.S., Mayne, A., Chikkala, N. and Ansari, A.A.
  AUTHORS
  TITLE
             Comparative sequence analysis of cytokine genes from human and
             nonhuman primates
             J. Immunol. 155 (8), 3946-3954 (1995)
  JOURNAL
             96003435
  MEDLINE
                (bases 1 to 1005)
REFERENCE
             2
  AUTHORS
            Villinger, F.J.
  TITLE
             Direct Submission
             Submitted (13-JAN-1995) Francois J. Villinger, Emory University,
  JOURNAL
             Pathology, 1327 Clifton Rd, Atlanta, GA 30322, USA
FEATURES
                      Location/Qualifiers
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                      /db xref="taxon:9530"
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                      /db xref="GI:644786"
                      /translation="MCHQQLVISWFSLVFLASPLMAIWELKKDVYVVELDWYPDAPGE
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                     GSSNPQGVTCGAATLSAERVRGDNKEYEYSVECQEDSACPAAEERLPIEVMVDAIHKL
                     KYENYTSSFFIRDIIKPDPPKNLQLKPLKNSRQVEVSWEYPDTWSTPHSYFSLTFCIQ
                     VQGKSKREKKDRIFTDKTSATVICRKNASFSVQAQDRYYSSSWNEWTSVPCS"
BASE COUNT
                275 a
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                                   257 g
                                            221 t
ORIGIN
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       61 ctcccctcat ggccatatgg gaactgaaga aagacgttta tgttgtagaa ttggactggt
      121 acceggatge ecctggagaa atggtggtee teacetgtga caccectgaa gaagatggta
      181 tcacctggac cttggaccag agtggtgagg tcttaggctc tggcaaaacc ctgaccatcc
      241 aagtcaaaga gtttggagat gctggccagt acacctgtca caaaggaggc gaggctttga
      301 gccattcact cctgctgcct cacaaaaagg aagatggaat ttggtccact gatattttaa
      361 aggaccagaa agaacccaaa aatgagacct ttctaagatg cgaggccaaa aattattctg
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      721 ccaagaactt gcagctgaag ccattaaaga attctcggca ggtggaggtc agctgggagt
      781 accetgacae etggagtaet ceacatteet actteteet gaeattetge atteaggtee
      841 agggcaagag caagagagaa aagaaagata gaatcttcac agacaagacc tcagccacgg
      901 tcatctgccg caaaaatgcc agctttagcg tgcaggccca ggaccgctac tatagctcat
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11
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mRNA
                                                                03-FEB-1996
            MMU19841
                         1080 bp
LOCUS
DEFINITION Macaca mulatta interleukin-12 alpha (IL-12a) mRNA, complete cds.
            U19841
ACCESSION
            U19841.1 GI:644799
VERSION
                                             Birgit OPPMANN, et al.
KEYWORDS
                                             USSN: 09/658,699
SOURCE
            rhesus monkey.
                                             Atty. Docket No.: DX01042X
 ORGANISM Macaca mulatta
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
            Cercopithecinae; Macaca.
            1 (bases 1 to 1080)
REFERENCE
            Villinger, F., Brar, S.S., Mayne, A., Chikkala, N. and Ansari, A.A.
  AUTHORS
            Comparative sequence analysis of cytokine genes from human and
  TITLE
            nonhuman primates
            J. Immunol. 155 (8), 3946-3954 (1995)
  JOURNAL
  MEDLINE
            96003435
            2 (bases 1 to 1080)
REFERENCE
            Villinger, F.J.
  AUTHORS
            Direct Submission
  TITLE
            Submitted (13-JAN-1995) Francois J. Villinger, Emory University,
  JOURNAL
            Pathology, 1327 Clifton Rd, Atlanta, GA 30322, USA
FEATURES
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                      /replace="a"
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                      /note="Leu to Pro"
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                      /note="Leu to Pro"
                      /replace="c"
                      714
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                      /gene="IL-12a"
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                      /note="Ile to Thr"
                      /replace="c"
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                     /note="Ser to Pro"
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BASE COUNT
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       61 gcatctcccc tcatggccat atgggaactg aagaaagacg tttatgttgt agaattggac
     121 tggtacccgg atgcccctgg agaaatggtg gtcctcacct gtgacacccc tgaagaagat
     181 ggtatcacct ggaccttgga ccagagtggt gaggtcttag gctctggcaa aaccctqacc
     241 atccaagtca aagagtttgg agatgctggc cagtacacct gtcacaaagg aggcgaggct
     301 ctaagccatt cactcctgct gcttcacaaa aaggaagatg gaatttggtc cactgatgtt
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     421 tctggacgtt tcacctgctg gtggctgacg acaatcagta ctgatctgac attcagtgtc
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     601 agtgcctgcc cagccgctga ggagaggctg cccattgagg tcatggtgga tgccattcac
     661 aageteaagt atgaaaaeta caccageage ttetteatea gggacateat caaaceegae
     721 ccacccaaga acttgcagct gaagccatta aagaattctc ggcaggtgga ggtcagctgg
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     841 gtccagggca agagcaagag agaaaagaaa gatagaatct tcacagacaa gacctcagcc
     901 acggtcatct gccgcaaaaa tgccagcttt agcgtgcagg cccaggaccg ctactatagc
     961 tcatcttgga gcgaatgggc atctgtgccc tgcagttagg ttgtgatccc aggatgaaaa
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mRNA
LOCUS.
            BTU11815
                         1012 bp
                                                     MAM
                                                               27-JAN-1996
DEFINITION Bos taurus interleukin 12 40 kDa subunit mRNA, complete cds.
ACCESSION
            U11815
            U11815.1 GI:555795
                                             Birgit OPPMANN, et al.
VERSION
                                             USSN: 09/658,699
KEYWORDS
                                             Atty. Docket No.: DX01042X
SOURCE
            COW.
  ORGANISM Bos taurus
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
            Bovidae; Bovinae; Bos.
               (bases 1 to 1012)
REFERENCE
            Zarlenga, D.S., Canals, A., Aschenbrenner, R.A. and Gasbarre, L.C.
 AUTHORS
            Enzymatic amplification and molecular cloning of cDNA encoding the
  TITLE
            small and large subunits of bovine interleukin 12
            Biochim. Biophys. Acta 1270 (2-3), 215-217 (1995)
  JOURNAL
  MEDLINE
            95244628
REFERENCE
               (bases 1 to 1012)
  AUTHORS
            Zarlenga, D.S.
            Direct Submission
  TITLE
            Submitted (05-JUL-1994) Dante S. Zarlenga, U.S. Department of
  JOURNAL
            Agriculture, ARS, LPSI, PIL, Beltsville, MD 20705, USA
FEATURES
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BASE COUNT
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      121 gctcctggag aaacagtggt cctcacatgt gacactcctg aagaagatgg catcacctgg
      181 acctcagacc agagcagtga ggtcttgggc tctggcaaaa ccttgaccat ccaagtcaaa
      241 gagtttggag atgctgggca gtacacctgt cacaaaggag gcgaggctct gagtcgttca
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      361 aaagaaccca aagctaagag ttttttaaaa tgtgaggcaa aggattattc tggacacttc
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      481 ggctcctctg acccccgagg ggtgacgtgc ggagcagcgt tgctctcagc agagaaqqtc
      541 agcttggagc acagggagta taacaagtac acagtggagt gtcaggaggg cagcgcctgc
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      661 tatqaaaact acaccaqcaq cttcttcatc agggacatca tcaaaccaga cccacccaag
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      781 gacacqtqqa qcaccccqca ttcctacttc tccctgacqt tttgtgttca ggtccagqga
      841 aagaacaaga gagaaaagaa actetteatg gaccaaacet cagccaaagt cacatgecac
      901 aaggatgcca acgtccgcgt gcaagcccgg gaccgctact acagctcatt ctggagtgaa
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